

RESEARCH ARTICLE

Phonological Adaptation of English Loanwords in Korean And Karakalpak: A Comparative Study

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Abstract

This study investigates the phonological adaptation of English loanwords in Korean and Karakalpak from a comparative perspective. In the context of globalization, English has become a major source of lexical borrowing, influencing languages with different phonological systems. The study aims to identify the key adaptation strategies employed in both languages and to examine how phonological constraints shape these processes. The data were collected from dictionaries and corpus materials, and a set of commonly used English loanwords was analyzed using phonological methods. The findings reveal that Korean exhibits a high degree of phonological modification, primarily through vowel epenthesis and syllable restructuring due to its strict phonotactic constraints. In contrast, Karakalpak demonstrates a relatively lower degree of modification, preserving more of the original phonetic structure while applying processes such as vowel harmony and consonant assimilation. The comparative analysis shows that while both languages follow systematic adaptation patterns, the nature and extent of these processes differ significantly. The study contributes to the field of Phonology by highlighting the interaction between universal adaptation tendencies and language-specific constraints. The findings have implications for linguistic theory, language teaching, and cross-linguistic studies in a globalized context.

KEY WORDS

Phonological adaptation, English loanwords, Korean language, Karakalpak language, loanword phonology, comparative linguistics, phonotactics, globalization.

INTRODUCTION

In the era of globalization, the influence of English as a global lingua franca has intensified across linguistic communities, particularly in the domains of technology, media, and international communication. This widespread influence has led to a significant increase in lexical borrowing, resulting in the integration of English loanwords into many languages, including Korean and Karakalpak. However, such borrowing is not limited to vocabulary expansion; it also involves systematic phonological adaptation, whereby foreign lexical items are

modified to conform to the phonotactic and phonological constraints of the recipient language. Korean, belonging to the Koreanic languages, and Karakalpak, a Turkic language, exhibit distinct phonological systems, which shape the adaptation of English loanwords in different ways. Korean is characterized by strict syllable structure constraints, often requiring vowel epenthesis to resolve consonant clusters and maintain permissible syllable patterns. In contrast, Karakalpak demonstrates adaptation processes influenced by vowel

harmony, consonant assimilation, and its agglutinative structure. These typological differences make a comparative investigation particularly valuable for understanding how languages with different phonological systems accommodate foreign elements.

The process of borrowing in both languages is also shaped by socio-cultural factors. In the Korean context, English loanwords are closely associated with globalization, technological advancement, and popular culture. In Karakalpak, borrowing is influenced by multilingual contact and socio-economic conditions, including interaction with neighboring languages. Despite these differences, both languages actively incorporate English lexical items, leading to diverse patterns of phonological adaptation. Although loanword phonology has been widely studied, there is a lack of comparative research focusing on English loanword adaptation in Korean and Karakalpak. Most studies examine these languages independently, without addressing cross-linguistic similarities and differences. This gap highlights the need for a systematic comparative analysis that can reveal both universal tendencies and language-specific strategies in phonological adaptation. The present study aims to investigate the phonological adaptation of English loanwords in Korean and Karakalpak from a comparative perspective. Specifically, it seeks to identify common patterns of adaptation, analyze the phonological strategies employed in each language, and examine how phonological constraints influence these processes. The significance of this research lies in its contribution to the field of Phonology, particularly in the area of loanword adaptation. By comparing two typologically distinct languages, the study provides insights into the interaction between universal phonological principles and language-specific constraints. Furthermore, the findings have practical implications for language teaching, translation, and the study of cross-linguistic influence in a globalized world.

LITERATURE REVIEW

The study of loanwords has long been a central topic in linguistics, particularly within contact linguistics. Loanwords are lexical items borrowed from one language into another as a result of cultural, technological, and socio-economic interaction. This process is systematic rather than arbitrary, as borrowed forms are reshaped to conform to the structural constraints of the recipient language (Haspelmath & Tadmor, 2009; Backus, 2021). In recent decades, globalization has

intensified the influence of English, leading to a rapid increase in lexical borrowing across many languages, including Korean and Karakalpak.

Within the field of Phonology, phonological adaptation refers to the modification of foreign lexical items in accordance with the phonotactic rules and phoneme inventory of the recipient language. This process is closely related to phonetic adaptation, which involves articulatory and perceptual adjustments. Scholars emphasize that loanword adaptation is shaped by both perception and phonological grammar, as speakers interpret foreign sounds through the filter of their native sound system (Peperkamp et al., 2008; Calabrese & Wetzels, 2020). As a result, common strategies such as vowel epenthesis, consonant substitution, and syllable restructuring emerge across languages.

Research on English loanwords in Korean has been extensive due to the strong impact of globalization and media. Korean, as part of the Koreanic languages, demonstrates systematic phonological adaptation strategies such as vowel insertion to resolve consonant clusters and substitution of non-native sounds. Studies indicate that Korean phonology strongly constrains loanword forms, leading to predictable adaptation patterns (Kang, 2011; Kim, 2020; Lee & Ramsey, 2021). Recent work also highlights the role of orthography and exposure to English in shaping pronunciation.

In contrast, research specifically focused on the Karakalpak language remains relatively limited. Existing studies primarily address lexical borrowing and language contact rather than detailed phonological adaptation. For instance, Utebaev (2020) examines the role of foreign lexical units in Karakalpak, noting that borrowed words undergo systematic phonetic modification to align with native pronunciation patterns. These studies suggest that phonological processes such as vowel harmony, consonant simplification, and assimilation play an important role in the integration of loanwords. However, detailed analyses of English loanword phonology in Karakalpak remain scarce, particularly from a comparative perspective. Despite the growing body of literature on loanword phonology, there is a noticeable lack of comparative studies examining English loanword adaptation in Korean and Karakalpak. Most existing research focuses on individual languages, without addressing cross-linguistic similarities and differences. This gap limits our understanding of how typologically different phonological systems respond to the same external linguistic influence. Therefore, the present study aims to address this

gap by providing a comparative analysis of phonological adaptation in Korean and Karakalpak. By examining these two languages together, the study contributes to a deeper understanding of loanword phonology and highlights the role of language-specific constraints in shaping adaptation patterns.

THEORETICAL FRAMEWORK

This study is grounded in the theoretical principles of loanword phonology, which examines how borrowed lexical items are integrated into the sound system of a recipient language. Within the field of Phonology, phonological adaptation is understood as a systematic process whereby foreign words are modified to conform to the phonotactic constraints and phonemic inventory of the borrowing language. This process involves restructuring sounds, syllables, and stress patterns in accordance with native phonological rules. Phonological adaptation differs from purely phonetic adjustment in that it reflects not only surface-level pronunciation changes but also deeper, rule-governed transformations within the phonological system. In the context of English loanwords, adaptation typically includes processes such as vowel epenthesis, consonant substitution, deletion, and syllable restructuring. These processes ensure that borrowed forms become pronounceable and acceptable within the target language. A central concept in this framework is loanword phonology, which explores how linguistic systems resolve mismatches between source and recipient languages. Loanword phonology operates at the intersection of perception, production, and phonological grammar. It seeks to explain how speakers interpret foreign sounds and how these interpretations are subsequently encoded into the phonological structure of the borrowing language.

One of the key models employed in this study is the concept of nativization. Nativization refers to the process by which foreign lexical items are adapted to resemble native words in terms of phonological structure. Through nativization, loanwords lose their foreign phonetic features and become fully integrated into the linguistic system. This process is particularly evident in languages with strict phonotactic constraints, where significant modification of the original form may occur. Another important theoretical perspective is the distinction between perception-based and production-based approaches to loanword adaptation. Perception-based theories argue that speakers adapt loanwords according to how they perceive foreign sounds through the filter of their

native phonological system. In contrast, production-based theories emphasize articulatory constraints, suggesting that adaptation occurs because speakers adjust foreign sounds to fit their habitual patterns of speech production. Contemporary approaches often integrate these perspectives, viewing loanword adaptation as the result of interaction between perceptual and articulatory mechanisms.

Phonotactic constraints also play a crucial role in shaping loanword adaptation. These constraints determine which sound sequences are permissible within a language and, consequently, how foreign elements must be modified. For example, languages that do not allow consonant clusters may insert vowels to break them, while others may simplify or delete certain segments. The influence of phonotactics is particularly relevant in a comparative context, as different languages impose different structural limitations on borrowed forms. In the case of Korean and Karakalpak, phonological adaptation is shaped by distinct phonotactic systems. Korean tends to enforce strict syllable structure constraints, often requiring vowel insertion and consonant adjustment, whereas Karakalpak exhibits processes such as vowel harmony and consonant assimilation. These differences provide a valuable basis for comparative analysis and allow for the examination of both universal and language-specific mechanisms in loanword adaptation. Overall, this theoretical framework integrates key concepts from loanword phonology, nativization theory, perception and production models, and phonotactic constraints. It provides the foundation for analyzing how English loanwords are phonologically adapted in Korean and Karakalpak and for identifying the factors that drive similarities and differences between the two languages.

METHODOLOGY

This study adopts a comparative research design to investigate the phonological adaptation of English loanwords in Korean and Karakalpak. A comparative approach is particularly appropriate for identifying both shared and language-specific adaptation patterns across typologically different languages. By analyzing parallel data from the two languages, the study aims to reveal how distinct phonological systems respond to the same source language input. The data for this study were collected from multiple sources to ensure reliability and representativeness. First, authoritative dictionaries of Korean and Karakalpak were consulted to identify established loanwords of English origin. Second, corpus materials, including online texts, media content, and

contemporary written sources, were used to capture actual usage and variation in loanword adaptation. These sources provide both standardized and naturally occurring examples of English loanwords in each language. The sample consists of a selected set of English loanwords that are commonly used in both Korean and Karakalpak. The selection was guided by the following criteria: (1) the words must be of clear English origin; (2) they must be attested in both languages; and (3) they should represent a range of phonological structures, including consonant clusters, different syllable types, and various vowel environments. This approach ensures that the dataset reflects diverse phonological contexts and allows for a more comprehensive analysis of adaptation strategies. A balanced sample was constructed to include loanwords from different semantic fields, such as technology, education, and everyday communication. This diversity helps to minimize domain-specific bias and provides a broader perspective on loanword adaptation processes.

The analysis is based on principles from Phonology, combining both phonetic and phonological approaches. Each loanword in the dataset was examined by comparing its original English form with its adapted forms in Korean and Karakalpak. The analysis focused on identifying key adaptation processes, including vowel epenthesis, consonant substitution, assimilation, deletion, and syllable restructuring. Phonetic analysis was used to observe surface-level changes in pronunciation, while phonological analysis was applied to identify systematic patterns and constraints underlying these changes. The results were then organized into categories to facilitate comparison between the two languages. Tables and examples were used to illustrate similarities and differences in adaptation strategies.

Several limitations should be acknowledged. First, the study relies on a limited sample of loanwords, which may not fully represent all patterns of adaptation in Korean and Karakalpak. Second, the availability of corpus data for Karakalpak is relatively restricted compared to Korean, which may affect the scope of analysis. Third, variation in pronunciation due to factors such as speaker differences, exposure to English, and

orthographic influence is not fully accounted for. Despite these limitations, the study provides a systematic and comparative overview of phonological adaptation processes in the two languages.

RESULTS

This section presents a comparative analysis of the phonological adaptation of English loanwords in Korean and Karakalpak. The analysis focuses on identifying key adaptation strategies, including vowel epenthesis, consonant substitution, assimilation, and syllable restructuring. The selected examples illustrate how each language modifies English lexical items to conform to its phonological system. Korean demonstrates systematic phonological adaptation due to its strict syllable structure constraints. Since Korean typically follows a consonant-vowel (CV) pattern and restricts consonant clusters, vowel epenthesis is one of the most common strategies. For example: strike - 스트라이크 (seu-teu-ra-i-keu), club - 클럽 (keul-leob) , school - 스쿨 (seu-kul), in these cases, vowels such as /u/ (eu) or /i/ are inserted to break consonant clusters. Additionally, consonants that do not exist in Korean phonology are replaced with the closest native equivalents. This reflects strong phonotactic constraints and a high degree of nativization.

In Karakalpak, phonological adaptation is influenced by vowel harmony, consonant assimilation, and relatively flexible syllable structures compared to Korean. Unlike Korean, Karakalpak allows certain consonant clusters, resulting in fewer vowel insertions. Examples include: club - klub , bank – bank, computer – kompyuter, here, adaptation primarily involves phonetic approximation and alignment with native pronunciation patterns. Vowel harmony may influence suffixation, while consonant substitution occurs when foreign sounds are absent in the Karakalpak phoneme inventory. Compared to Korean, the degree of structural modification is generally lower.

The comparison reveals both similarities and differences in adaptation strategies between Korean and Karakalpak.

Feature	Korean	Karakalpak
Syllable structure	Strict (CV-based)	More flexible
Consonant clusters	Not allowed → broken by	Often preserved

	vowels	
Vowel epenthesis	Very frequent	Rare
Consonant substitution	Frequent	Moderate
Vowel harmony	Not present	Present
Adaptation degree	High (strong modification)	Moderate (closer to original)

The analysis demonstrates that Korean and Karakalpak employ different phonological strategies in adapting English loanwords due to their typological differences. Korean relies heavily on vowel epenthesis and syllable restructuring to satisfy strict phonotactic constraints. In contrast, Karakalpak preserves more of the original phonological structure, applying adaptation primarily through phonetic approximation and vowel harmony. Despite these differences, both languages exhibit systematic and rule-governed adaptation processes, supporting the view that loanword phonology is shaped by internal linguistic constraints rather than random variation.

DISCUSSION

The findings of this study demonstrate that the phonological adaptation of English loanwords in Korean and Karakalpak is shaped by both universal linguistic principles and language-specific constraints. From the perspective of Phonology, the observed adaptation patterns confirm that loanword integration is a systematic process governed by phonotactic rules, phoneme inventories, and structural limitations of the recipient language. One of the key observations is the contrast in adaptation strategies between the two languages. Korean exhibits a high degree of structural modification, primarily through vowel epenthesis and syllable restructuring. This supports the concept of nativization, where foreign lexical items are extensively reshaped to conform to native phonological patterns. The strict consonant-vowel syllable structure of Korean necessitates the insertion of vowels to resolve consonant clusters, resulting in forms that may significantly differ from the original English pronunciation. This finding aligns with perception-based models of loanword adaptation, which suggest that speakers interpret foreign sounds through the filter of their native phonological system.

In contrast, Karakalpak demonstrates a relatively lower degree of phonological modification. The preservation of

consonant clusters and closer approximation to the original English forms indicate that Karakalpak allows greater phonotactic flexibility. Adaptation in Karakalpak is primarily influenced by phonetic approximation, vowel harmony, and consonant assimilation. This suggests a more balanced interaction between perception and production mechanisms, where both auditory input and articulatory ease shape the adapted forms. The comparative analysis highlights that while both languages follow systematic adaptation processes, the extent and type of modification depend on their phonological structures. Korean prioritizes structural conformity, whereas Karakalpak tends to preserve phonetic similarity. This contrast illustrates how typologically different languages respond differently to the same external linguistic input.

Globalization plays a significant role in shaping these adaptation patterns. In the Korean context, the widespread influence of English is closely linked to technological development, education, and the global expansion of Korean popular culture. The high frequency of English loanwords has led to the standardization of adaptation patterns and increased exposure to English phonology. In Karakalpak, globalization interacts with local socio-economic conditions and multilingual environments, influencing both the adoption and adaptation of English loanwords. As a result, borrowing processes in Karakalpak are shaped not only by global trends but also by regional linguistic dynamics. Cultural factors further contribute to the differences observed between the two languages. In Korean, the integration of English loanwords is often associated with modernity, innovation, and global identity. In Karakalpak, loanwords may reflect practical needs and socio-economic changes, leading to different patterns of usage and adaptation. These cultural dimensions reinforce the idea that loanword adaptation is not purely a linguistic process but also a socio-cultural phenomenon.

Overall, the findings support the view that loanword

phonology is influenced by an interplay of phonological constraints, perceptual mechanisms, and external socio-cultural factors. By comparing Korean and Karakalpak, this study demonstrates that adaptation strategies are both universally motivated and language-specific, providing valuable insights into cross-linguistic variation in phonological systems.

CONCLUSION

This study has explored the phonological adaptation of English loanwords in Korean and Karakalpak from a comparative perspective. The findings confirm that loanword adaptation is a systematic and rule-governed process shaped by the phonological structures of the recipient languages. Despite sharing the same source language, Korean and Karakalpak employ different strategies due to their distinct phonotactic constraints. Korean demonstrates a high degree of modification, relying on vowel epenthesis and syllable restructuring to conform to its strict phonological patterns. In contrast, Karakalpak preserves more of the original phonetic structure, with adaptation influenced by phonetic approximation, vowel harmony, and assimilation. These differences highlight the role of language-specific constraints in shaping adaptation processes.

From a theoretical standpoint, the study contributes to Phonology by showing how universal tendencies interact with individual language systems in loanword adaptation. It also supports models that emphasize the importance of perception and nativization in integrating foreign elements. Although limited by dataset size and resource availability, particularly for Karakalpak, the study provides a foundation for further research. Future studies may expand the data and explore sociolinguistic factors to gain a more comprehensive understanding of loanword adaptation. Overall, the comparative analysis offers valuable insights into how different phonological systems respond to global linguistic influence.

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